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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,610	04/21/2004	Noel B. Dequina	INSL.0101	5197
26122	7590	09/20/2005		
LAW OFFICES OF GARY R. STANFORD 330 W OVERLOOK MOUNTAIN RD BUDA, TX 78610			EXAMINER LAM, TUAN THIEU	
			ART UNIT	PAPER NUMBER
			2816	
DATE MAILED: 09/20/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/828,610

Applicant(s)

DEQUINA ET AL.

Examiner

Tuan T. Lam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8 is/are allowed.
- 6) ☒ Claim(s) 9-11, 17, 19, 20 and 24-27 is/are rejected.
- 7) ☒ Claim(s) 12-16, 18 and 21-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This is a response to the amendment filed 8/19/2005. Claims 1-27 are pending and are under examination.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 9, 17, 19, 20 and 24-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Ozguc (USP 6,037,811).

Figure 1 of Ozguc shows a driver circuit comprising a P and N channel transistors (MP1, MN1) coupled together at an intermediate node (OUT) and in between voltage source Vcc and ground, a multi-level current pulse generator provides at least one multi-level current sufficient to switch said P and N channel while minimizing average power dissipation (variable currents I1 and I2 are capable of generating current adjustably at different levels, lower level current dissipates less power than high level current, thus having a minimum average power dissipation), a clamp circuit (128 and 158) coupled to limit gate to source voltage of P channel and N channel devices to a predetermined maximum level of Vcc as called for in claims 9, 19.

Regarding claims 17 and 25, the first current pulse I1 is to turn on the P channel transistor (charging) while the N channel is off, the second pulse I2 is to turn off P channel transistor while the N channel is on (discharging).

Regarding claim 20, the adjustable currents I1 and I2 are switchable current sources.

Regarding claim 24, current mirror circuits are seen as 222 and 252 of figure 2.

Regarding claim 26, the first current pulse I1 generated in response to the assertion of PWM (106) and the second current pulse I2 generated in response to the dissipation of the PWM (108).

Regarding claim 27, a first clamping circuit (124) of Ozguc prevents said of PDMOS transistor from dropping below a first voltage level (Vcc) and a second clamping circuit (158) prevents said gate of said NDMOS transistor from rising above a second voltage level (ground).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozguc (USP 6,073,811) in view of Doutreloigne (USP 6,731,151) Figure 1 of Ozguc discloses all the limitation of claim 9 as noted above except for the P and N channel devices to be PDMOS and NDMOS, respectively as called for in claim 10. Doutreloigne teaches that PDMOS and NDMOS are known for capable of withstanding a high voltage. Therefore, it would have been obvious to person skilled in the art at the time the invention was made to replace Ozguc's P and N channel devices (MP1 and MN1) with PDMOS and NDMOS, respectively, for the purpose of preventing the transistors devices breaking down under high voltage operation.

Regarding claim 11, a first clamping circuit (124) of Ozguc prevents said of PDMOS

transistor from dropping below a first voltage level ( $V_{cc}$ ) and a second clamping circuit (158) prevents said gate of said NDMOS transistor from rising above a second voltage level (ground).

*Response to Arguments*

5. Applicant's arguments filed 8/19/2005 have been fully considered but they are not persuasive. Applicant argues that Ozguc does not show multi-level current pulse generator that provides at least one predetermined multi-level current pulse as called for in claims 9 and 19 are not persuasive. Applicant is referred to figure 3 which shows a current pulse I1 having multi-level accordingly to the control signals UP, DOWN and MASTER. Therefore, the rejection is deemed proper. Claims 9, 17, 19-20 and 24-27 remain rejected under 35USC 102(b).

*Allowable Subject Matter*

6. Claims 1-8 are presently allowed.

7. Claims 12-16, 18, 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Lam whose telephone number is 571-272-1744. The examiner can normally be reached on Monday to Friday (7:30 am to 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY P. CALLAHAN can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tuan T. Lam  
Primary Examiner  
Art Unit 2816

9/17/2005